ECONOMIC COMMENTARY

Alberta's Productivity Performance is Improving

September 15, 2014

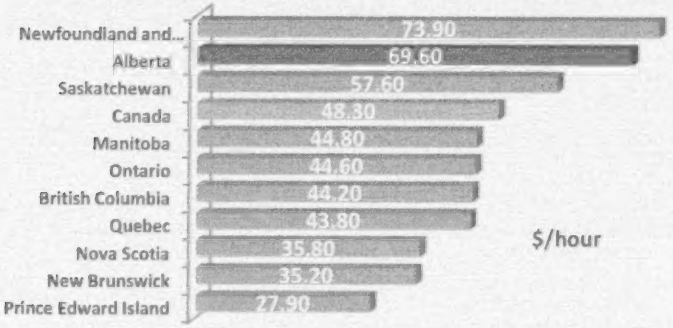
Highlights:

Alberta's 1.4% average annual productivity growth between 2008 and 2013 compares favourably to rates achieved in the other provinces, Canada and even international jurisdictions such as the United States

Alberta Government

According to Statistics Canada's productivity database, Alberta has the second highest labour productivity in the country. In 2013, labour productivity in Alberta's business sector was $69.60 per hour, 44% higher than the Canadian average of $48.30 per hour. Only Newfoundland and Labrador had a higher productivity level, $73.90 per hour, in 2013 because of its highly productive crude oil sector.

Business Sector Productivity of Labour - 2013
(Real GDP per Hour Worked, in 2007 constant dollars)

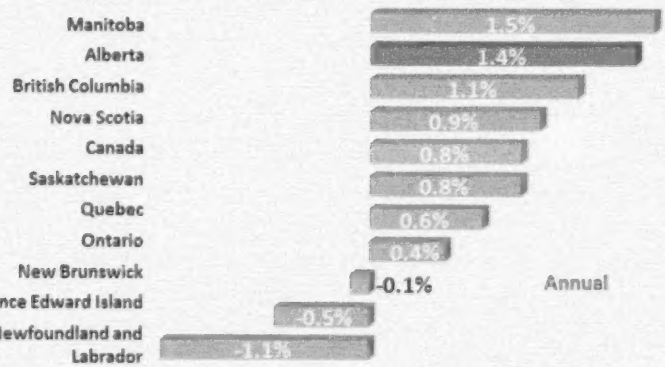


Source: Statistics Canada – Table 383-0029, Labour productivity and related variables by business sector industry

Over the past five years, GDP in Alberta's business sector has increased by 13.9% or 2.6% per year. Over the same period, the total number of hours worked increased by 6.4% or 1.2% per year. As a result, labour productivity rose 7.1% over the 5-year time period or 1.4% per year. In other words, just over one-half of the increase in GDP came as a result of increased labour productivity and just less than one-half was the result of increased labour input.

Alberta's 1.4% average annual growth rate in labour productivity was the second highest provincial growth rate over the past five years and was nearly double the Canadian growth rate of 0.8% per year.

Business Sector Labour Productivity Growth Rates
2008 - 2013 (Based on Hours Worked)



Source: Statistics Canada – Table 383-0029, Labour productivity and related variables by business sector industry

Both Alberta's high productivity level and its less than robust productivity growth are in large part the result of its large and capital-intensive oil and gas extraction sector. In 2013, the labour productivity level was $260 per hour in the mining and oil and gas sector, because of very high levels in the oil and gas extraction sub-sector ($564 per hour). Levels are high as output (or GDP) per worker and per hour worked is very high in that industry. When excluding the mining and oil and gas sector Alberta's labour productivity level drops to $51.40 per hour, 17% higher than the Canadian average of $43.90. The $51.40 is much lower than the overall business sector productivity level of $69.60 in Alberta which in turn was 44% higher than the Canadian average.

Labour Productivity in Alberta Industries in 2013
(Real GDP per Hour Worked, in 2007 constant dollars)

Source: Statistics Canada -- GDP at basic prices
PSTS: Professional, Scientific and Technical Services

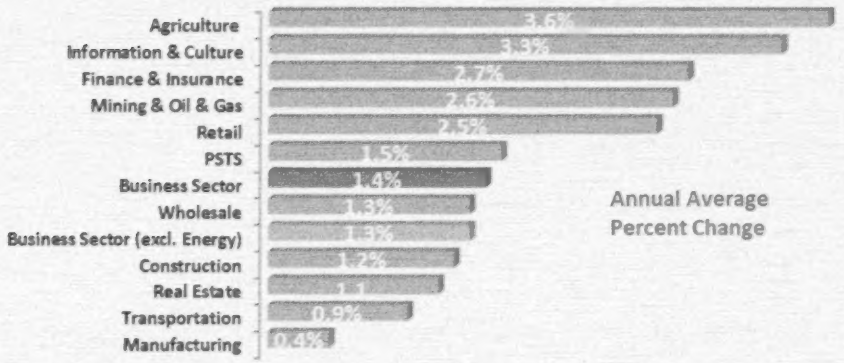
Although the mining and oil and gas sector has the highest productivity level, it declined sharply over a 10-year period ending in 2008: productivity in the oil and gas extraction sub-sector declined by more than one-half between 1999 and 2008. There are a number of reasons for this decline. First, Alberta's conventional oil and gas resources were in decline and it takes more effort to find and extract each additional barrel or gigajoule. Second, the switch to oil sands has also reduced the overall productivity level for the oil and gas extraction sector as oil sands require more labour than conventional reserves. Third, new oil sands projects will have employees on-site before production actually starts (raising hours worked without any increase in GDP). Fourth, high oil prices have made high cost, labour and capital intensive oil reservoirs more attractive.

In more recent years, productivity has improved in the mining and oil and gas sector: between 2008 and 2013 this sector's productivity advanced at an average rate of 2.6% per year. The main reasons for this turn-around are that a number of large oil sands projects started producing and that conventional oil production staged a recovery during the past three years. It is likely that this sector's productivity will continue to improve as more oil sands projects enter the production phase and possibly also when Alberta's tight oil and shale gas reserves are tapped into because of new technological breakthroughs such as fracking.

Most other sectors had strong productivity growth. Farm consolidation and capital investment led to the highest productivity growth in the agricultural sector with a rate of 3.6% per year. Information and

culture (mainly telecommunication services) benefited from heavy investment in telecom equipment, especially by cell phone companies, and had productivity growth of 3.3% per year. Productivity growth of 2.7% per year in the finance and insurance sector was the result of a large decline in the number of jobs in the rental and leasing sub-sector. Alberta's manufacturing sector had weak productivity growth of only 0.4% per year between 2008 and 2013, a rate that was lower than Canada's 1.1% growth rate. High growth was registered in the globally competitive electronics (6.5% per year), machinery (8.4% per year), fabricated metals (6.0%) and wood products (5.4%) industries.

Labour Productivity Growth Rates in Alberta's Industries
2008 - 2013 (Based on Hours)



Sources: Statistics Canada and Alberta Innovation & Advanced Education
PSTS = Professional, Scientific and Technical Services

In summary, Alberta's productivity level of $69.60 GDP per hour worked was the second highest in the country and 44% higher than the Canadian average. Alberta's productivity growth had been weak historically, mainly because the oil and gas sector had sharply declining productivity during the decade prior to 2008. However, productivity growth has improved in recent years because of a pronounced turn-around in the oil and gas sector. Alberta's 1.4% average annual productivity growth between 2008 and 2013 compares favourably to rates achieved in the other provinces, Canada and even international jurisdictions such as the US. To gain a better understanding of productivity you need to understand productivity at the sector level. Different sectors are experiencing different productivity performance, which helps us to better understand of the success and challenges being experienced in productivity and where the focus needs to occur.